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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,053

05/22/2006

Jan Cornelis Van Der Hoeven

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

NGUYEN, DONGHAI D

ART UNIT

PAPER NUMBER

3729

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,053	Applicant(s) VAN DER HOEVEN ET AL.	
	Examiner DONGHAI D. NGUYEN	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/22/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: “strengthening member 17”, “reinforcement strip 17” (page 4, lines 26, 28-29), “retaining parts C” (page 7, line 5) and reference number 5' being called with different names such as: outer connection parts (page 5, line 30), "lead connection parts" (page 4, line 34) and “inner connection parts” (page 6, line 4) is confusing it is uncertain as to these part are the same or difference and should be included in the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --METHOD OF MANUFACTURING AN OPTICAL ACTUATOR--.

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Claim Objections

3. Claims 24-30 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 24-30 attempt to claim the leaf frame and the method of manufacturing the lead frame, the lead frame band, an actuator, optical reading and/or writing head and change the subject matter, but fail to further limit the subject of the previous claims.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-23 direct to the method of manufacturing, but there is no positive step of manufacturing cited in the claims. Applicants are advised to amend the claim such that the manufacturing limitations (providing plurality of leads; injection molding synthetic resin onto the leads; etc.) are cited instead of the structure limitations.

The phrase “and/or” (in claims 4 and 20) is vague and confusing since it is uncertain as to which limitations applicants try to claim. The phrases “for example” (claims 12 and 29-30) and “preferably” (claim 15) render the claim indefinite because it is unclear whether the limitation(s) following the phrases are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-20, and 22-30, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,535,059 to Mitsumori et al.

Regarding claim 1, Mitsumori et al disclose a method of manufacturing at least one actuator (10), which actuator (10) comprises at least one actuator part (12, 16) substantially made of synthetic resin, wherein a lead frame (19/20) comprising a number of leads (14) is provided, said synthetic resin actuator part (12, 16) of said actuator (10) being injection-molded onto said lead frame (19/20, see Fig. 5).

Regarding claim 2, Mitsumori et al disclose said actuator (10) comprises at least two separate synthetic resin parts (12, 16) which are injection-molded in such positions on said lead frame (19/20) that said at least two synthetic resin actuator parts (12, 16) are coupled to each other via a number of said leads (14).

Regarding claim 3, Mitsumori et al disclose said actuator (10) is provided with spring means (14) for coupling different actuator parts (12, 16), which spring means are provided by at least some of said leads (14) of the lead frame (19/20).

Regarding claim 4, Mitsumori et al disclose at least some of said leads (14) are arranged for conducting at least one electrical signal, said leads (14) particularly comprising an electrically

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conductive material, more particularly at least one suitable metal and/or alloy (see Col. 5, lines 1-4).

Regarding claim 5, Mitsumori et al disclose said lead frame (19/20) comprises at least one retaining part (see Fig. 5) for retaining said leads (14), said retaining part being at least partially removed from said leads (14) after the molding of said synthetic resin actuator part (12, 16, see Fig. 4).

Regarding claim 6, Mitsumori et al disclose said at least one synthetic resin actuator part (12, 16) comprises a first synthetic resin subpart (12a, 16a) and a second synthetic resin subpart (12b, 16b), wherein said lead frame (19/20) comprises a first and a second subpart (14a/c, 14b/d), wherein said first synthetic resin actuator subpart (12a, 16a) is injection-molded onto said first lead frame subpart (14a/c), and wherein said second synthetic resin actuator subpart (12b, 16b) is injection-molded onto said second lead frame subpart (14b/d, see Fig. 4).

Regarding claim 7, Mitsumori et al disclose said first actuator subpart (12a, 16a) and second synthetic resin actuator subpart (12b, 16b) are molded simultaneously (see Col. 5, lines 52-54).

Regarding claim 8, Mitsumori et al disclose said first and second lead frame subparts (14a-d) are in a first position with respect to each other during the molding of said first and second synthetic resin actuator subparts (12a-b, 16a-b), for molding these synthetic resin subparts separately from each other, and wherein said lead frame subparts (14a-d) are brought into a second position with respect to each other after the molding of said actuator subparts (1a-b, 16a-b) for bringing said synthetic resin actuator subparts together (see Figs. 3-4).

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Regarding claim 9, Mitsumori et al disclose said first and second lead frame subparts (1a-d) extend substantially in one plane in said first position (see Fig. 5).

Regarding claim 10, Mitsumori et al disclose said first and second lead frame subparts (14a-d) are located substantially opposite each other in said second position (see Fig. 3).

Regarding claim 11, Mitsumori et al disclose at least two lead frames (19/20) are provided for manufacturing at least two respective actuators (see Fig. 5).

Regarding claim 12 and 13, Mitsumori et al disclose said at least two lead frames (19/20) are integrally connected, in a lead frame band (see Fig. 5) separated from each other before or after the molding of said synthetic resin actuator part (12, 16, see Fig. 4).

Regarding claim 14, Mitsumori et al disclose said lead frame (14a-d) comprises at least one row of leads (14a/c), such that each at least one synthetic resin actuator part (12a) is coupled to at least two consecutive leads (14a/c).

Regarding claim 15, Mitsumori et al disclose said at least one actuator (10) is provided with at least one electromagnet (13), particularly a coil, preferably before the molding of said synthetic resin actuator part (12/16).

Regarding claim 16, Mitsumori et al disclose said electromagnet (13) is connected to at least part (112a-d) of said lead frame (14).

Regarding claim 17, Mitsumori et al disclose said electromagnet (13) is electrically connected to at least some of said leads (14, see Col. 6, lines 33-37).

Regarding claim 18, Mitsumori et al disclose said at least one actuator (10) is provided with at least two first electromagnets (13 a, b), and said lead frame (14) is provided with an

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interconnecting part (112a-d) for connecting said first electromagnets (13) electrically to each other.

Regarding claim 19, Mitsumori et al disclose said actuator (10) is provided with at least one optical element (11), and wherein the actuator (10) is arranged for moving said optical element.

Regarding claim 20, Mitsumori et al disclose said optical element (11) is a lens, a mirror, and/or an optical fiber.

Regarding claim 22, Mitsumori et al disclose said actuator (10) is arranged and suitable for use in an optical reading and/or writing head of an optical reading and/or writing device (see Col. 7, lines 9-15).

Regarding claim 23, Mitsumori et al disclose said lead frame (14) is arranged for anchoring said synthetic resin actuator part (12, 16), and the lead, frame (14) particularly comprises a number of perforations (see Figs. 4-5) to provide said anchorage.

Regarding claims 24-30, Mitsumori et al disclose the lead frame (19/20), lead frame band, an actuator (10), an optical reading and/or writing head having a support for an optical disc (see Col. 7, lines 9-15); a method of manufacturing a lead frame (19/20).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsumori et al.

Mitsumori et al do not disclose the optical element (11) is formed by injection-molding during the injection-molding of said synthetic resin actuator part (12, 16). It would have been an obvious matter of design choice to one having ordinary skill in the art the time the invention was made to choose any desired method of forming the optical element such as injection-molding during the injection-molding of said synthetic resin actuator part, since Applicants have not disclosed the specific method of forming the optical element by injection-molding during the injection-molding of said synthetic resin actuator part, solves any stated problem or for any particular purposes and it appears that the invention would perform equally well with the method of forming an optical element (11) as disclosed by Mitsumori et al.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art references cited for their teaching of manufacturing an optical reading/writing head actuator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DONGHAI D. NGUYEN whose telephone number is (571)272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (571)-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN
September 2, 2008

/Donghai D. Nguyen/
Primary Examiner, Art Unit 3729